

**Amendments to the Claims:**

This listing of claims will replace all prior versions, and listings, of claims in the application:

**Listing of Claims:**

1. (currently amended) A nucleic acid which encodes a soluble polypeptide which comprises an extracellular domain of a gonadotropin receptor and thioredoxin, wherein the soluble polypeptide is capable of binding to ~~the~~ gonadotropin.
2. (currently amended) A nucleic acid which encodes a soluble polypeptide which comprises an extracellular domain of a gonadotropin receptor and a peptide segment comprising consecutive histidine residues, wherein the soluble polypeptide is capable of binding to ~~the~~ gonadotropin.
3. (canceled)
4. (currently amended) The nucleic acid of claim 1 or 2~~any of claims 1-2~~, wherein the gonadotropin receptor is a human luteinizing hormone/choriogonadotropin receptor and the soluble polypeptide is capable of binding to human luteinizing hormone or human chorionic gonadotropin.
5. (canceled)
6. (canceled)
7. (currently amended) The nucleic acid of claim 1 or 2~~any one of claims 1-2~~, wherein the gonadotropin receptor is a human follicle stimulating hormone receptor and the soluble polypeptide is capable of binding to human follicle stimulating hormone.

8-15. (canceled)

16. (currently amended) A replicable vector which comprises the nucleic acid of claim 1 or 2~~any one of claims 1-2~~.

17. (canceled)

18. (original) A host cell which comprises the vector of claim 16.

19-23. (canceled)

24. (original) A host-vector system for the production of a soluble polypeptide which comprises the vector of claim 16 and a suitable host cell.

25. (currently amended) A method for producing a soluble polypeptide which comprises growing the host vector system of claim 24 under conditions permitting production of the soluble polypeptide and recovering the soluble polypeptide so produced, wherein the soluble polypeptide comprises (a) an extracellular domain of a gonadotropin receptor and thioredoxin or (b) an extracellular domain of a gonadotropin receptor and a peptide segment comprising consecutive histidine residues, and wherein the soluble polypeptide is capable of binding to gonadotropin.

26. (currently amended) A soluble polypeptide encoded by the nucleic acid of claim 1 or 2~~any one of claims 1-2~~.

27-49. (canceled)